

Date: Thursday, 6/15/2006 7:45:02 AM  
 User: Linda Lacelle

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: WEARPLATE
Job Number	: 24199		
Estimate Number	: 10299		
P.O. Number	: N/A	Part Number	: D25775
This Issue	: 6/15/2006 S.O. No. : N/A	Drawing Number	: D2577 REV E
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 6/13/2006 Type : PURCHASED PARTS	Drawing Revision	: E
Previous Run	: 24878	Material	: N/A
Written By	: <u>SEE JOURNAL BELOW</u>	Due Date	: 12/5/2005
Checked & Approved By	:	Qty:	50 Um: Each
Comment	: Est: F 02.09.24 Re-format KJ/RF		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M1010S16GA	1010/1025/A21/6aA SHEET
-----	------------	-------------------------



Batch: M100473



Comment: Qty.: 0.9810 sf(s)/Unit Total : 49.0500 sf(s)  
 1010/1025/A21/6aA SHEET

M 06 06 15

2.0	WATER JET	FLOW WATER JET
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Comment: FLOW WATER JET

M 06 06 19 2(50)

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

M 06 06 19 50

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Inspect dimensions per template D2577-5T1

Doc 06-20 91

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL &amp; MEDIUM FAB RESOURCE 1

Deburr

M.F. 06-06-20

6.0	BRAKE NC	NC BRAKE
-----	----------	----------



Comment: NC BRAKE

1-Form on brake using DT8155 and DT8179 as per Dwg D2577  
 2-Form joggle using DT8157 as per Dwg D2577  
 3-Identify as D2577-5

SB 06/06/20 50

Date: Thursday, 6/15/2006 7:45:02 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 24199

Part Number: D25775

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0

QC5

INSPECT WORK TO CURRENT STEP



*Job 06-21*

Comment: INSPECT WORK TO CURRENT STEP

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

*DC 06/06/21*

*(50)*

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*FC 06 06 22*

*(49)*

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *FP 19*

*FC 06 06 22*

*(49)*

11.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

*DD 06/06/22*

*(49)*

Job Completion



*W 06/06/22*

Date: Tuesday, 6/13/2006 3:08:06 PM  
User: Linda Lacelle

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	WEARPLATE
<b>Job Number</b> :	24199		
<b>Estimate Number</b> :	10299		
<b>P.O. Number</b> :		<b>Part Number</b> :	D25775
<b>This Issue</b> :	6/13/2006	<b>S.O. No.</b> :	
<b>Prsht Rev.</b> :	NC	<b>Drawing Number</b> :	D2577 REV E
<b>First Issue</b> :	1/1	<b>Project Number</b> :	N/A
<b>Previous Run</b> :	24878	<b>Drawing Revision</b> :	E
<b>Written By</b> :		<b>Material</b> :	
<b>Checked &amp; Approved By</b> :		<b>Due Date</b> :	12/5/2005
<b>Comment</b> :	Est: F 02.09.24 Re-format KJ/RF		

Qty: 50 Um: Each

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	PG	PURCHASING
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1010/1025 166A  
(M10105166A)



Comment: PURCHASING

Batch: M100473

Issue P/O:

Email or Ship DXF file to vendor

Laser Cut per Dwg D2577 flat pattern D2577-5

Material release note required

M 06 06 15

2.0	D25775F	Wearplate, Centre
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Water Jet E  
Dry Row E  
Dry Row E



Comment: Qty: 1.0000 U(s)/Unit Total: 50.0000 U(s)

WEAR PLATE FWD

M 06 06 15 (50)

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------

QC2



Inspect As per Template  
D2577-5T1



Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect For Transit Damage

Ensure material release note is attached

M 06 06 15 (50)

4.0	QC8	DIMENSIONAL CHECK
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QC8



Comment: DIMENSIONAL CHECK

Inspect dimensions per template D2577-5T1

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL &amp; MEDIUM FAB RESOURCE 1

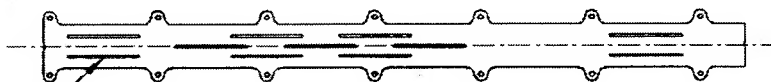
Deburr



RELEASED  
00 09 26 17

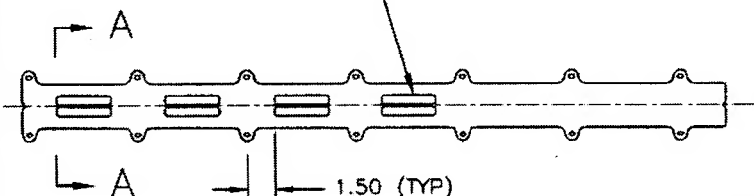
DESIGN	DRAWN BY	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA	REV. E
CHECKED	APPROVED	DRAWING NO. D2577	SHEET 1 OF 5
DATE	TITLE	WEARSHOE	SCALE
00.09.22			1:10
A	96.09.16	NEW ISSUE	
B	96.12.04	ADD HARDCOAT WELDS	
C	97.05.30	CHANGE HOLES TO OBROUNDS	
D	98.08.17	CORRECTED DIMENSIONS ON -1 & -3	
E	00.09.22	ADD D2577-101/-11/-13 INCORPORATE DE09176	

7560 HARDCOAT WELD  
4.0 LONG  
0.063 TO 0.125 HIGH  
(TYP. 11 PLS.)  
WELD AFTER BENDING AS  
ILLUSTRATED PER DT8308

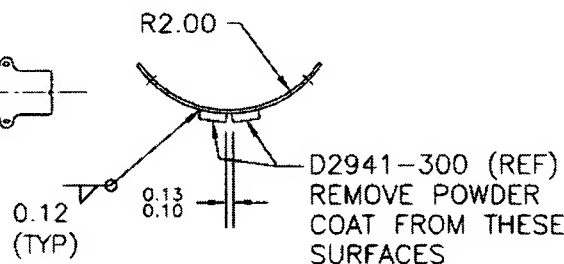


D2577-1 & D2577-3 WEARSHOE  
MAKE FROM D2577-11 AND D2577-13 RESPECTIVELY  
FINISH: POWDER COAT GREY (4.3.5.6) PER DART QSI 005 4.3  
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

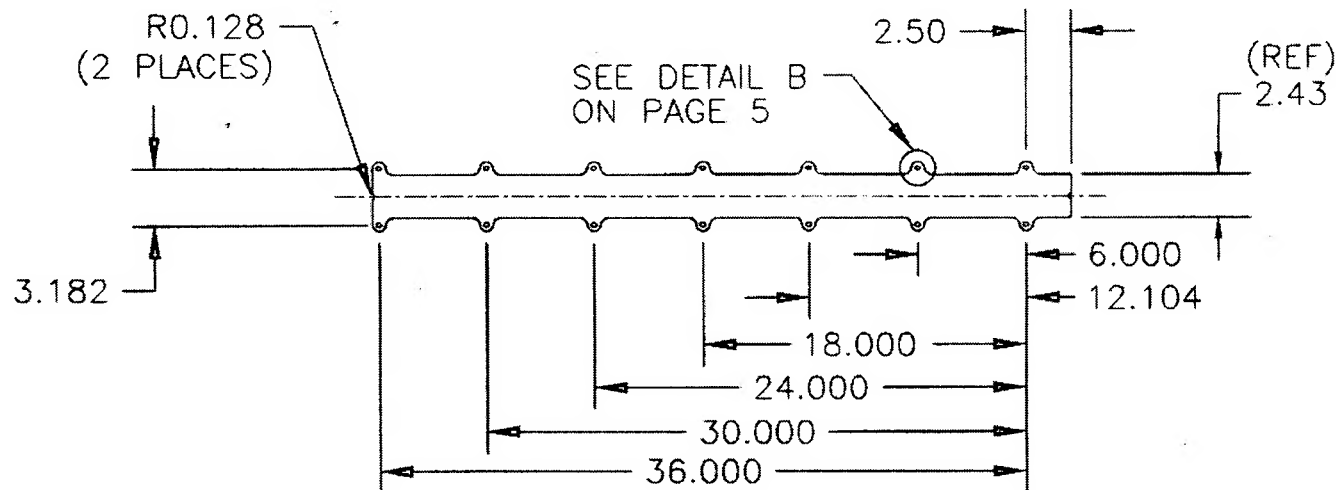
D2941-300  
SHWAYDER WEAPADS  
(8 PLACES)



SECTION A-A  
SCALE 1:5



D2577-21 & D2577-23 WEARSHOE  
MAKE FROM D2577-11 AND D2577-13 RESPECTIVELY  
FINISH: POWDER COAT GREY (4.3.5.6) PER DART QSI 005 4.3  
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



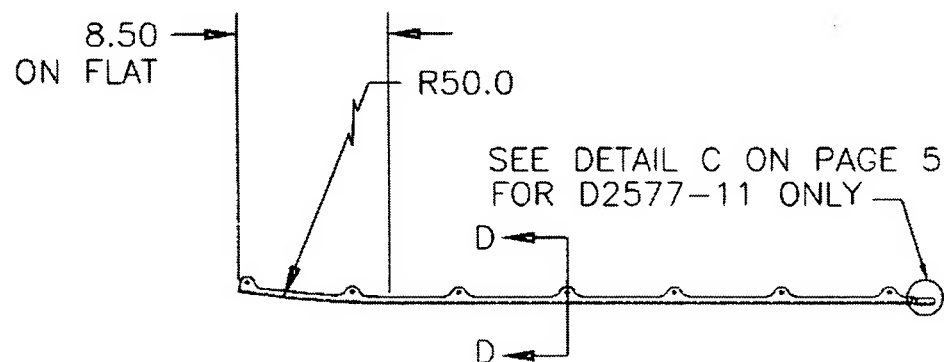
# D2577-101 FLAT PATTERN

BREAK ALL SHARP CORNERS 0.010 TO 0.020

MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A569/A570

SERIES STEEL 0.063 THICK

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



# D2577-11 & D2577-13 LONGITUDINAL BEND

MAKE FROM D2577-101

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



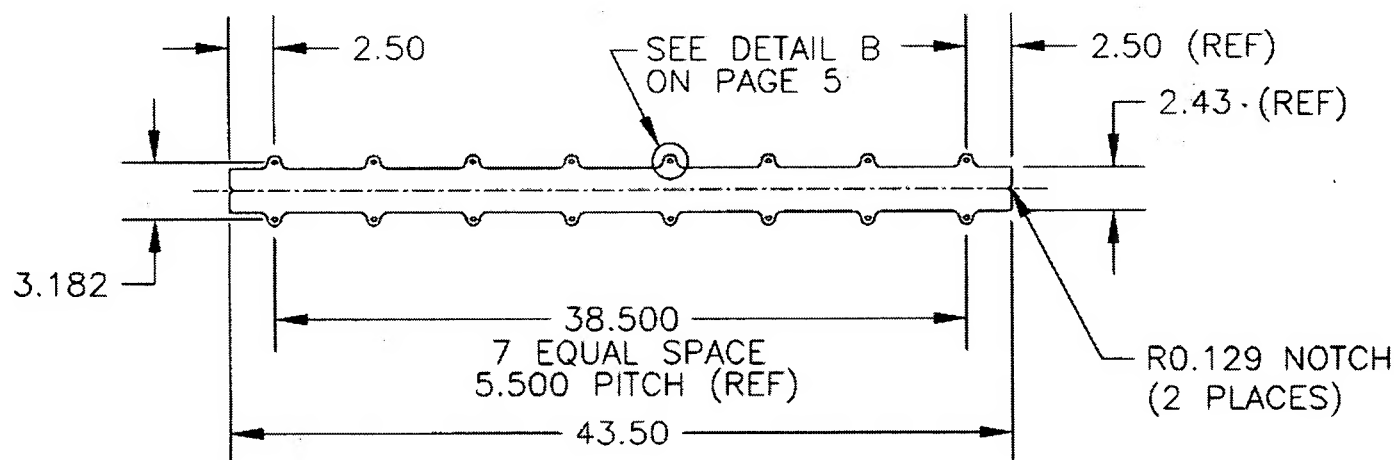
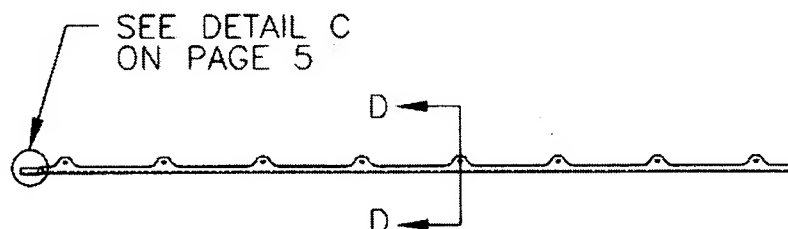
DESIGN	DRAWN BY	DRAWING NO.	REV. E
CHECKED	APPROVED	D2577	SHEET 2 OF 5
DATE	TITLE	WEARSHOE	SCALE
00.09.22			1:10

DART AEROSPACE LTD  
HAWKESBURY, ONTARIO, CANADA

RELEASED  
00 01 26 #D

**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAMMERSBURT, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. E
DATE		D2577	SHEET 3 OF 5
00.09.22		TITLE	SCALE
		WEARSHOE	1:10

**RELEASED**  
00.09.22D2577-5 FLAT PATTERND2577-5 LONGITUDINAL BENDD2577-5 WEARSHOE

BREAK ALL SHARP CORNERS 0.010 TO 0.020

MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A569/A570

SERIES STEEL 0.063 THICK

FINISH: POWDER COAT GREY (4.3.5.6) PER DART QSI 005 4.3

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

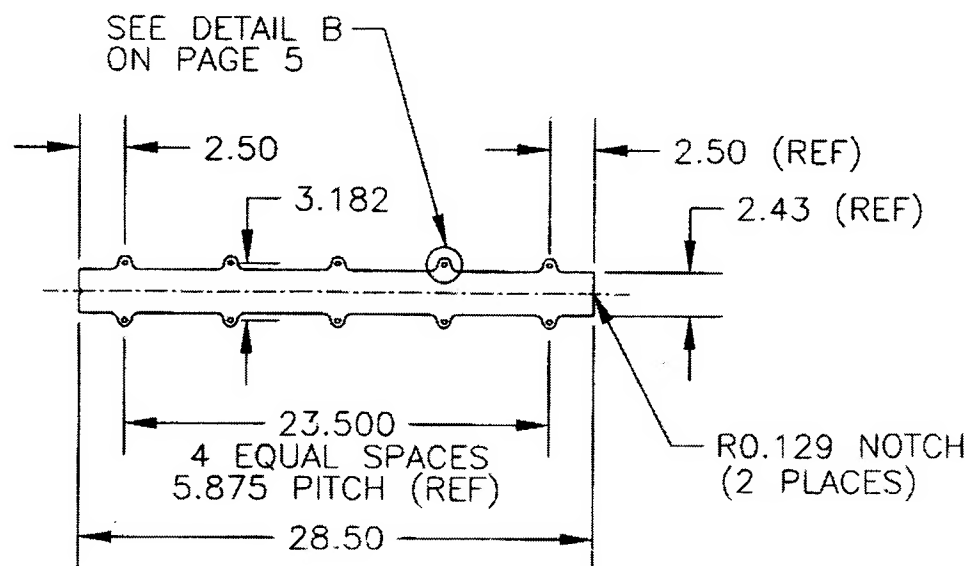
**DART**



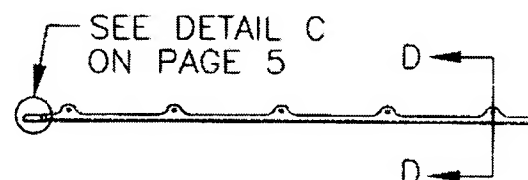
DESIGN	DRAWN BY	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2577
DATE 00.09.22	TITLE WEARSHOE	REV. E SHEET 4 OF 5
	SCALE 1:10	

RELEASED  
00 09 22

# D2577-7 FLAT PATTERN



# D2577-7 LONGITUDINAL BEND



# D2577-7 WEARSHOE

BREAK ALL SHARP CORNERS 0.010 TO 0.020

MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A569/A570

SERIES STEEL 0.063 THICK

FINISH: POWDER COAT GREY (4.3.5.6) PER DART QSI 005 4.3

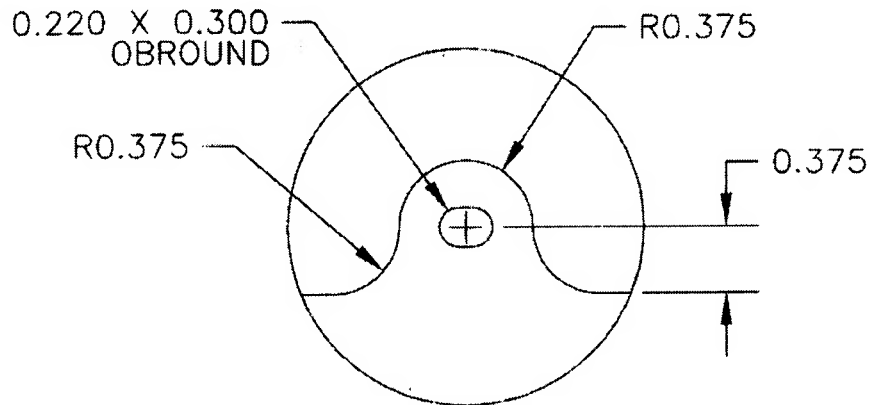
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



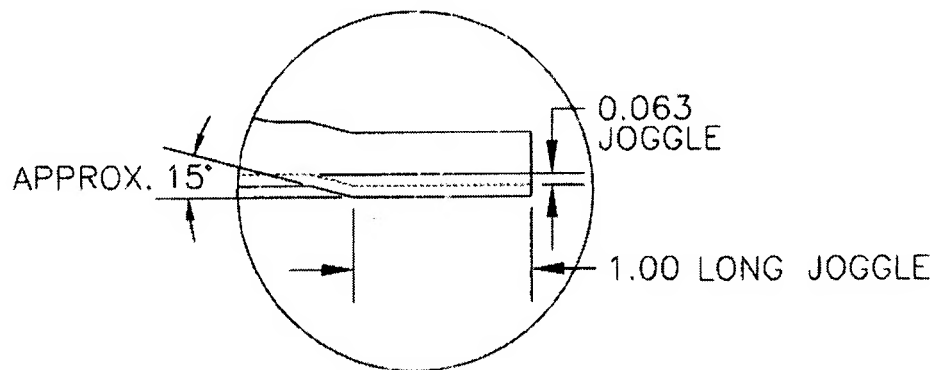
DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2577	REV. E SHEET 5 OF 5
DATE 00.09.22		TITLE WEARSHOE	SCALE 1:10

RELEASED  
00.09.26

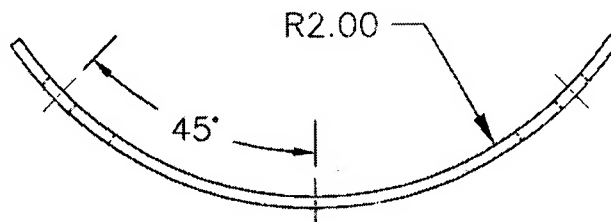
DETAIL B (SCALE 1:1)



DETAIL C (SCALE 1:1)



SECTION D-D (SCALE 1:1)



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5/38

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	<b>24199</b>
<b>Description: Wearplate</b>	<b>Part Number:</b>	<b>D2577-5</b>
<b>Dwg: D2577 Rev. E</b>	<b>Qty:</b>	<b>50</b>
Page 1 of 1		

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveller <b>Dwg not required</b>	OK	05.09.02	50
2	PG	Issue P/O: <u>2008589</u> <b>Email or Ship DXF file to vendor</b> Laser Cut per Dwg D2577 flat pattern D2577-5 <b>Material release note required</b>	LN	0509-06	50
3	RG	Receive and Inspect for transit damage <b>Ensure that material release note is attached</b>	CD	05/09/28	50
4	QC6	Inspect dimensions per template D2577-5T1	2	05-10-06	50
5	GB	Deburr if necessary		N/A	
6	GB	Form on brake using DT8155 and DT8179 as per Dwg D2577	SB	05/11/08	50
7	GB	Form joggle using DT8157 as per Dwg D2577 <b>Identify as D2577-5</b>	SB	05/11/08	50
8	QC5	Inspect work to Step 7	2	05-11-08	50
9	FP	Powder Coat Grey (Ref.4.3.5.6) per QSI 005 4.3	FC	05/11/09	50
10	QC3	Inspect Powder Coat	11	05/11/09	50
11	FP	Identify and Stock	11	05/11/09	50
12	AC	Cost / part <u>14.88</u>	54C	05-11-10	50
13	DC	Close W/O <u>15.23</u> Inspect Level 21	12	05/11/10	50

Rev	Date	Change	Revised By	Approved
A	96.08.20	New Issue		
B	98.04.15	Changed finish detail, changed forming sub-contractor	KB	
C	99.02.02	Added inspection levels, Jig numbers	DM	
D	99.03.25	Added Joggle	DM	
E	00.10.02	Rev.E dwg	EC	
F	02.09.24	Re-format	KJ RF	9

**RELEASED**  
02/10/02 RF

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Sep 02, 2005  
09:01 am

Work Order No : 0024199  
Project Name : D2577-5  
Project For : WK538  
Work Order Type : Main  
Main WO Number :  
House Part Number : D2577-5  
Description : Wearplate, Centre  
Manufactured : Yes  
Amount Req'd : 50  
Amount Done : 0  
Start Date : 09-01-05  
Est Finish Date : 09-22-05  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Mark Up : 0.000%  
Actual Mark Up : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00



New Zealand Steel Limited  
Glenbrook, South Auckland  
Postal: Private Bag 92121, Auckland, New Zealand  
Telephones: (09) 375 8969 / 375 8111 Auckland  
(09) 235 8969 / 235 3535 Waiuku  
Fax: (09) 375 8959

# TEST CERTIFICATE

Ref: 5078/21768

CUSTOMER		Wilkinson		SPECIFICATION		ASTM A1008 CS Type A		CERTIFICATE No		TC109561																	
CUSTOMER O/N		90-21N-540		PRODUCT		CRA WIDE COIL		PAGE		1 of 1																	
MILL O/N		471159		DIMENSIONS		0.055" x 48" x Coil		DATE		23 April 2005																	
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT														MECHANICAL TESTS (TEST SPECIFICATION - ASTM A370)											
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH			
		x100														x10000						x100					
R9-457097-00	640590	4	TR	20	13	17	12	17	20	1	8	1	1					180°									
R9-457098-00	640590	4	TR	20	13	17	12	17	20	1	8	1	1					Good				46		1562			
R9-457099-00	640590	4	TR	20	13	17	12	17	20	1	8	1	1					Good				46		1483			
R9-457100-00	640590	4	TR	20	13	17	12	17	20	1	8	1	1					Good				46		1562			
R9-457101-00	640590	4	TR	20	13	17	12	17	20	1	8	1	1					Good				46		1496			
R9-457102-00	640590	4	TR	20	13	17	12	17	20	1	8	1	1					Good				47		1562			
																						47		1555			

YIELD		GAUGE LENGTH (G.L.)		PLASTIC STRAIN RATIO (r)		IMPACT TEST		CARBON EQUIVALENT VALUE (CE)	
(A)=0.2% PROOF STRESS	(A)=200mm	(C)=80mm	(E)=2"	(A)=r0	(C)=r45	(A)=10mm x 10mm	(C)=5mm x 5mm	(A)=C+Mn/6	(C)=C+Mn/6+Si/24
(B)=LOWER YIELD STRESS	(B)=50mm	(D)=5.65 x Su	(F)=8"	(B)=r90	(D)=(r0+r90+2r45)/4	(B)=7.5mm x 10mm	(D)=2.5mm x 10mm	(B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15	(D)=

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED *Satish Misra*  
QC METALLURGIST

16 ya crms



# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Nov 08, 2005  
11:10 am

Work Order No	: 0024199	Department Code:	
Project Name	: D2577-5	Burden Flags	: NNNNNNNN
Project For	: WK538	WO Status	: Open
Work Order Type	: Main	Invoice State	: Not Invoiced
Main WO Number	:	Invoice Date	:
House Part Number	: D2577-5	Invoice Number	:
Description	: Wearplate, Centre	Invoice Amount	: 0.00
Manufactured	: Yes		
Amount Req'd	: 50	Order Entry No	:
Amount Done	: 0	OE Value	: 0.00
Start Date	: 09-01-05		
Est Finish Date	: 09-22-05	Est Margin	: 0.000%
Act Finish Date	:	Actual Margin	: 0.000%
Drawings Req'd	: No		
Ok for Approval	:		
Approval Rec'd	:	\$0 Posted to Finished Goods	

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	: 0.00	676.50	100.00	0.00	676.50
Engineering Hours	: 0.00	0.00	0.00		
Engineering Cost	: 0.00	0.00	0.00	0.00	0.00
Production Hours	: 0.00	0.00	0.00		
Production Cost	: 0.00	0.00	0.00	0.00	0.00
Packaging Hours	: 0.00	0.00	0.00		
Packaging Cost	: 0.00	0.00	0.00	0.00	0.00
OverHead Hours	: 0.00	0.00	0.00		
OverHead Cost	: 0.00	0.00	0.00	0.00	0.00
CNC Hours	: 0.00	0.00	0.00		
CNC	: 0.00	0.00	0.00	0.00	0.00
Misc. Hours	: 0.00	0.00	0.00		
Misc.	: 0.00	0.00	0.00	0.00	0.00
Burden	: 0.00	0.00	0.00		
Total Cost	: 0.00	676.50	100.00		
Margin	: 0.000	0.000			
Selling Cost	: 0.00	676.50			

	Estimated	Actual
Labour Hrs/Amount Done	: 0.00	0.00
Profits/(Loss)	: 0.00	( -676.50)